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10/562,054	12/23/2005	Naoki Hashiguchi	025260-105	4344
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KRUEER, STEFAN				
ART UNIT		PAPER NUMBER		
3654				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary

Application No.

10/562,054

Applicant(s)

HASHIGUCHI, NAOKI

Examiner

Stefan Krueer

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5 - 6, 9, 16 - 18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5 - 6, 9, 16 - 18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the amended limitation "the" in "the vertical projection plane". There is insufficient antecedent basis for this limitation in the claim.

All claims should be revised carefully to correct all other deficiencies similar to the ones noted above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Senn (2,701,032).

Senn, as previously cited, discloses his elevator apparatus (Fig.'s 1 and 4) comprising:

- a car (30) having a wall portion (any side edge), for being raised and lowered within a hoistway ("... elevator shaft... extending from the upper deck 19-20-21 to the lower deck 11-13-14..." (Col. 2, L. 12);
- a car guide rail (22) installed within the hoistway, for guiding the car when the car is raised and lowered; and
- a car guide shoe (24) mounted on the car, for engaging with the car guide rail, wherein the wall portion is provided with a recess ("...each of its four corners...", Col. 2, L. 43) and has a front face provide with a car entrance (side facing ramp, right side, Fig. 1), a rear face facing the front face, a first side face and a second side face facing the first side face.
- the car is provided with a first suspending member connecting portion (53, Fig. 5) and a second suspending member connecting portion (53, of any other corner) to which a main suspending member for suspending the car is connected respectively, the first suspending member connecting portion and the second suspending member connecting portion are provided in the third recess and the fourth recess, respectively;
- the car guide shoe is at least partially disposed in the recess and includes a first car guide shoe provided in the first recess, and a second car guide shoe provided in the second recess; and;
- the car is provided on its lower portion below a car floor (upper, load-bearing surface of 30) with a first car suspending pulley (40) and a second car suspending pulley (40, other corner);
- main suspending members (38-39-41, Fig. 3 - 4) for suspending the car are wound around the first car suspending pulley and the second car suspending pulley; and
- the first car suspending pulley and the second car suspending pulley are disposed to be partially located in the third recess and the fourth recess respectively, in a vertical projection plane.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niigato Engineering Co. Ltd. (JP 50-124063, henceforth Niigato) in view of Nakamura et al (JP-4089787).

Niigato, as previously cited, discloses an elevator apparatus comprising:

- a car (5) having a wall portion (edge as depicted in Fig. 4), for being raised and lowered within a hoistway;
- a car guide rail (4) installed within the hoistway, for guiding the car when the car is raised and lowered; and
- a car guide shoe (6) mounted on the car, for engaging with the car guide rail, wherein the wall portion is provided with a recess (depicted, not designated, Fig.'s 2 – 3, "... four corners of the ... platform 5...", Translation, Page 3, L. 21), and has a front face provided with a car entrance (open portion of loading of cargo; front as defined by position of pulleys 14; Translation, Pg. 4, L. 13), a rear face facing the front face, a first side face (side facing 17) and a second side face facing the first side face);
- the car guide shoe is at least partially disposed in the recess *on a vertical projection plane*;
- the recess includes a first recess provided in a corner portion between the front face and the first side face, and a second recess provided in a corner portion between the rear face and the second side face, a third recess provided in a corner portion between the rear face and the first side face, and

- a fourth recess provided in a corner portion between the front face and the second side face;
- the car is provided with a first suspending member connecting portion (9) and a second suspending member connecting portion (9) to which a main suspending member (7) for suspending the car is connected respectively, the first suspending member connecting portion and the second suspending member connecting portion are provided in the third recess and the fourth recess, respectively and
 - the car guide shoe is at least partially disposed in the recess *on a vertical projection plane* and the car guide shoe includes a first car guide shoe provided in the first recess *on a vertical projection plane*, and a second car guide shoe provided in the second recess *on a vertical projection plane*; however

Niigato is silent with respect to their car guide shoe is at least partially disposed in the recess as well as a counterweight is disposed in at least one of his third and fourth recess.

Attention is directed to Nakamura et al, as previously cited, who teach their elevator apparatus (Fig. 1) comprising a car (2) having a wall portion for being raised and lowered in a hoistway (3), a car guide rail (22) installed in the hoistway, their car is provided with at least one recess (3d, Fig. 3) in at least one corner portion between a front and side face(s) of their car and a car guide shoe (21) disposed in at least a portion of their recess for engaging their car guide rail that is disposed at least partially in their recess and a counterweight (24, Fig. 1) that is raised and lowered in said hoistway, wherein said counterweight is disposed in said at least one recess, for feature of "... making (sic) the plane area of the hoistway 1 small" (Abstract), and a counterweight guide rail (opposite side of elevator car guide rail 22) is at least partially disposed in said at least one recess.

It would have been obvious to one of ordinary skill in the art to modify the reference of Niigato with the teaching of Nakamura et al to provide a counterweight with

suspension in at least one of the third and fourth recesses of Niigato in lieu of the co-extensive placement of suspension elements (7a, 7b, 11 and 12a, Fig. 2), wherein a common cable-accumulating drum (17) is used to retract and protract the suspension members (7a – 7d) to raise and lower, respectively, the car of Niigato, in that said counterweight(s) provide necessary balance to said platform as well as simplicity of arrangement and functionality by providing direct counteracting force and balance for tension and leveling control.

Claims 9 and 17 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (20010009210) in view of Mizuno (JP-02282177A).

Re: Claims 9 and 18, Kobayashi et al discloses an elevator apparatus (Fig.'s 9 - 10) comprising:

- A car (4) having a wall portion (not designated), for being raised and lowered within a hoistway,
- A car guide rail (9a, 9b) installed within the hoistway, for guiding the car when the car is raised and lowered; and
- The wall portion is provided with a front face provided with a car entrance (depicted, not indicated), a rear face facing the front face, a first side face (left, facing 9A) and a second side face (right, facing 9B) facing the first side face;
- the car is provided on the first side face side with a first suspending portion (4ba) to which a first main suspending member (7 hitched to 4ba) for suspending the car is connected;
- the car is provided on the second side face side with a second suspending portion (4bb) to which a second main suspending member (7 hitched to 4bb) for suspending the car is connected; and
- the first suspending portion disposed on a first side of the first guide rail and the second suspending portion disposed on a second side opposite the first side, of the second guide rail; and

- the first car guide rail and the second car guide rail including rear faces and having a pitch between car guide rail rear faces which is set equal to or smaller than a car suspension pitch defined by the first main suspending member and the second main suspending member (Fig. 10); however, Kobayashi et al are silent with respect to their wall portion is provided with a recess.

Attention is directed to Mizuno, as previously cited, who teaches an elevator apparatus (Fig. 5 – 6) comprising:

- A car (4) having a his wall portion (not depicted, understood), for being raised and lowered within a hoistway (1),
- A car guide rail (6b) installed within the hoistway, for guiding the car when the car is raised and lowered; and
- The wall portion is provided with a recess (about 6, Fig. 6) and has a front face provided (side facing dimension "W₁") with a car entrance (depicted, not indicated), a rear face facing the front face, a first side face (left, facing 6) and a second side face (right, facing 6b) facing the first side face;
- the recess of said wall portion includes a first recess (about 6, Fig. 6) provided in the first side face, and a second recess (about 6b) provided in the second side face, the first recess and the second recess projecting into an interior of the car, for feature of "... substantially decreasing elevator space occupying a building" (sic) (Abstract).

However, though Mizuno is silent *within his abstract* as to a guide shoe at least partially disposed in his recess, a guide shoe is well known in the art.

It would have been obvious to one of ordinary skill in the art to modify the reference of Kobayashi et al with the teaching to Mizuno to provide (side) wall portions having a recess for at least partially disposing a car guide shoe to further a saving in elevator space for refurbishments and retrofits of existing structures.

Re: Claim 17, Kobayashi et al disclose their car is provided with a plurality of car doors; however, Kobayashi et al are silent with respect to their cars doors overlap one

another in a door-open state as well as a car door device for opening and closing a car entrance.

Mizuno is similarly silent.

Nevertheless, the use of overlapping car doors and a car door device for opening and closing a car entrance are well known in the art and would have been obvious to one having ordinary skill in the art.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Senn in view of Ammon (6,006,865).

Re: Claim 16, Senn discloses a drive device (31, Fig. 1 – 2) provided in an upper portion of the hoistway and having a drive sheave (37) around which a main suspending member for suspending the car is wound, for raising and lowering the car via the main suspending member.

However, Senn is silent with respect to his drive device is disposed so that a rotating shaft of the drive sheave extends vertically or substantially vertically.

Attention is directed to Ammon who teaches his drive device (4) having a drive sheave (4.1) wherein his drive device is disposed so that a rotating shaft of the drive sheave extends vertically or substantially vertically, thereby "... arranged in the lift shaft in [a] space-saving manner and is easily accessible" (Col. 1, L. 28).

It would have been obvious to one of ordinary skill in the art to modify the reference of Senn with the teaching of Ammon to utilize a drive device affording a drive sheave mounted planar to an overhead wall or support structure in an elevator shaft to further promote space utilization without compromising accessibility for maintenance.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Mizuno, as applied to Claim 9, and in further view of Tomaseti (5,975,249).

Re: Claim 20, Kobayashi et al and Mizuno are silent regarding a safety device.

Attention is directed to Tomaseti, as previously cited, who teaches his safety device (21, 24) for arresting the travel of his car, wherein his safety device, as known in

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the art, is at least partially disposed in his recess (8) of his rucksack (cantilevered) suspension, wherein said suspension affording compactness.

It would have been obvious to one of ordinary skill in the art to modify the invention of Kobayashi et al and Mizuno with the teaching of Tomasetti to provide a safety device as known in the art for ancillary braking when a car is at a landing or in (uncontrolled) motion.

Response to Arguments

Applicant's arguments filed 27 July 2009 with respect to **Claims 1, 5, 6 and 9** have been fully considered but they are not persuasive.

With respect to **Claim 1**, components comprising the guide rails, pulleys and connecting portions, as well as the suspension portions, of Senn are accommodated in the recess of Senn so as not to project onto the car floor of Senn; hence, said components, notably said connecting portions, are provided in the claimed recesses.

With respect to **Claims 5 and 9**, applicant's attention is directed to a further embodiment(s) of the prior art of record as referenced and underscored above.

With respect to **Claim 6**, the amended recitation "the car is provided on its lower portion below a car floor with a first car suspending pulley and a second car suspending pulley" is disclosed by Senn in as much as said pulleys extend below a car floor, yet are not provided fully underneath said floor.

Neither the original claim language nor the amended claim language overcame the rejections based on the prior art of record of the previous office action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Darwent et al (4,249,640) and Aulanko et al (5,429,211) and Murakami et al (2001/0047908) are cited for reference of a car having first and second chamfered portions located along a diagonal of their cage, as well as guide shoes and a safety device disposed within their chamfered portions; and an elevator car having first- and second car suspending pulleys provided fully underneath a car floor of an elevator car, wherein said first- and second car suspension pulleys can be disposed approximate diagonally opposed corner portions of said elevator car, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Q. Nguyen can be reached on 571.272.6952. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

/Stefan Kruer/

Examiner, Art Unit 3654

16 November 2009

/John Q. Nguyen/

Supervisory Patent Examiner, Art Unit 3654